

REMARKS

By the above amendment and the accompanying RCE, claims 1 - 24 have been canceled without prejudice or disclaimer of the subject matter thereof and new claims 25 - 30 have been presented.

Applicants note that an electronic apparatus having a housing surface as a heat-dissipating surface such as that of the present invention is limited in the housing surface as a heat-dissipating surface so that the heat-dissipation value is changed by the superficial area of the housing. In accordance with the present invention, as illustrated in Fig. 1 and 5, a heat dissipating member in the form of a plate 10 has a flow passage in the form of a meandering pipe a arranged for flowing a liquid medium therethrough and is disposed on an inner wall surface forming a rear surface 13 of a housing so as to diffuse heat in the direction to outside air. It is desired that the electronic apparatus in the form of a notebook computer, for example, is of a thin size, and the present invention is directed to providing a circulating pump of reduced size while providing a minimum pipe or flow passage length which meanders or is disposed over a substantial area of the heat-dissipating wall surface of the housing so as to dissipate heat substantially uniformly over the heat-dissipating wall surface on which the heat-dissipating member is disposed. That is, as described at page 16, line 10 to page 17, line 16 of the specification, the heat-dissipating pipe 9 extends in a meandering manner generally uniformly over the display case panel so as to dissipate heat from the heat-dissipating sheet 10 substantially uniformly over the entire surface thereof, as shown in Fig. 1, with the length of the passage of the heat-dissipating pipe 9 becoming 1 to 1.5m and the diameter of the heat-dissipating 9 being made as small as possible such that most of the flow of resistance caused in the circulating passage comes to occur in the heat-

dissipating pipe portion. Thus, the flow resistance is made as small as possible in view of the matching of both the operating flow rate brought about by the pump 11 and the flow resistance with the pump characteristics. As described, the inner diameter and the length of the heat-dissipating pipe is set to 1.5mm and 1.5m, respectively. Furthermore, as described at page 11 of the specification, the radiation area of the rear surface of the display case 2 is about 90000mm². The area of 90000mm² corresponds to 0.09m², and considering a heat-dissipating superficial area or unit area thereof as 0.1m², then, in order to reduce the size of the pump and obtain a minimized circulation flow rate, the flow passage of the heat-dissipating member which is configured to have a length of 1m to 1.5m has a length within a predetermined range per unit area of the heat-dissipating wall surface as obtained by:

$$1/0.09 \times 0.1 = 1.1 \text{ to } 1.5/0.09 \times 0.1 = 1.7$$

so that the flow passage length is configured within a range of about 1.1 - 1.7 m per 0.1m² unit area of the heat-dissipating wall surface on which the heat-dissipating member is disposed. By the present amendment, the aforementioned features are recited in independent claim 25 and the dependent claims of this application and applicants submit that such features are not disclosed or taught in the cited art as will become clear from the following discussion.

The rejection of claims 1 - 24 under 35 USC 103(a) as being unpatentable of Ohashi et al (US 5,764,483) is traversed insofar as it is applicable to the present claims and reconsideration and withdrawal of the rejection are respectfully requested.

As to the requirements to support a rejection under 35 USC 103, reference is made to the decision of In re Fine, 5 USPQ 2d 1596 (Fed. Cir. 1988), wherein the

court pointed out that the PTO has the burden under '103 to establish a prima facie case of obviousness and can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. As noted by the court, whether a particular combination might be "obvious to try" is not a legitimate test of patentability and obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. As further noted by the court, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

Furthermore, such requirements have been clarified in the recent decision of In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002) wherein the court in reversing an obviousness rejection indicated that deficiencies of the cited references cannot be remedied with conclusions about what is "basic knowledge" or "common knowledge".

The court pointed out:

The Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is immaterial to patentability, and could not be resolved on subjected belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher."... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion. (emphasis added)

Applicants note that irrespective of the position by the Examiner concerning the disclosure of Ohashi et al, which has common inventors to inventors of the present application (Ohashi) and, assuming arguendo, that Figure 5 of Ohashi et al discloses a metal pipe 42 which serves as a heat-dissipating section for constituting a thermal transport device which is directly attached to metal box 10', which metal pipe has an inner diameter of about 2mm as described in column 5, lines 25 - 49, there is no disclosure or teaching in Ohashi et al that the flow passage of the heat-dissipating member is configured to have a length within a predetermined range per unit area of the heat-dissipating wall surface so as to enable the liquid-moving means to be minimized while providing sufficient circulating flow rate for the circulating liquid, as recited in independent claim 25 and the dependent claims of this application. Further, there is no disclosure or teaching that the flow passage length of the heat-dissipating member is configured within a range of about 1.1-1.7m per 0.1m² unit area of the heat-dissipating wall surface of the one of the first housing and the second housing on which the heat-dissipating member is disposed, as recited in claim 26. There is no disclosure in Ohashi et al concerning a length of the pipe 42 in relation to the heat-dissipating wall surface area, which as described in the specification of this application, enables the pump size to be minimized and to provide a sufficient flow rate which is a minimized flow rate. Accordingly, applicants submit that claim 25 and the dependent claims patentably distinguish over Ohashi et al in the sense of 35 USC 103 and any suggestion by the Examiner to provide the claimed features represents a hindsight reconstruction attempt utilizing the principle of "obvious to try" which is not the standard of 35 USC 103. See In re Fine, supra. Accordingly, applicants submit that all claims patentably distinguish over the cited art and should be considered allowable thereover.

With regard to the features of the dependent claims, in addition to claim 26 specifically setting forth the range of the length of the flow passage per unit area of the heat-dissipating wall surface, claim 27 recites an inner diameter of the flow passage length which is not disclosed or taught by Ohashi et al, with dependent claims 28 and 29 defining a minimum and maximum circulating flow rate as obtainable by the circulating pump of reduced size, thereby enabling a thin sized electronic apparatus to be provided. Further claim 30 defines the heat-dissipating wall surface as being that of the second housing which has the display device therein. Applicants submit that such features further patentably distinguish over Ohashi et al in the sense of 35 USC 103 and such claims should be considered allowable together with parent claim 25.

In view of the above amendments and remarks, applicants submit that all claims present in this application should now be in condition for allowance and issuance of an action of a favorable nature is courteously solicited.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 500.40473CX1), and please credit any excess fees to such deposit account.

Respectfully submitted,

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